Chapter 2 Alternatives

2.1 ALTERNATIVES

2.1.1 Introduction

This chapter describes and compares the five management alternatives considered for the Revised Forest Plan for the GMNF. The main focus of this chapter is to sharply define the differences between alternatives. Alternatives provide a framework for analyzing different ways of meeting the purpose and need and for addressing the issues discussed in Chapter 1. These alternatives show a range of options for guiding natural resource management activities on the GMNF over the next 10 to 15 years.

Alternatives express different desired future conditions through different Management Area (MA) allocation. The alternative that is selected in the Record of Decision (ROD) will be a management strategy that will guide all natural resource management activities and establish management direction for the GMNF.

2.1.2 Alternative Development

The alternatives include different options to resolve issues and to fulfill the purpose and need discussed in Chapter 1. The public, other federal, State, and local agencies, as well as Forest Service employees, contributed to the identification of five "major" issues that are addressed with alternatives in the FEIS. Following an interdisciplinary approach, the Forest Service used the five major issues as the primary basis on which to focus development of five alternatives that have been carried forward for detailed analysis in the FEIS. While all five alternatives provide a wide range of multiple uses, goods, and services, each addresses the issues in different ways.

Public participation through local planning group meetings held from 2003 into the summer of 2004 helped focus the issues and scope of needed alternative development. Following these meetings, Forest Service staff developed five preliminary alternatives in response to the issues and need for change. The following parameters were used in this process:

- Congressionally designated areas and special areas will not get smaller
- Ski areas and expansion areas will stay the same
- Habitats required for species viability can't be eliminated but amounts and locations could shift
- The current management (no action) alternative will not have additional Wilderness Study Areas or Special Areas, and will not use new MAs
- All newly acquired lands (existing MA 9.2) will be assigned a MA designation except in the current management alternative
- There will be more Wilderness Study Areas considered and included in at least one alternative
- Developed recreation sites and cross-country ski areas will be located in the Diverse Forest Use MA
- Follow all federal, State, and local laws and legal requirements
- Maintain a viable timber program
- Maintain a multiple use and balanced approach
- There will be no extremes that overly emphasize one resource over another
- Attempt to accommodate existing Special Use Permits
- Strive to limit tension between management and legal framework
- At a minimum maintain the existing amount of remote backcountry areas
- Strive to have MA boundaries follow identifiable boundaries on the ground
- Locate MAs based on major emphasis and to the extent possible where compatible uses can be maximized
- Will not designate new Research Natural Areas (RNAs) but may designate new special areas and candidate RNAs
- At least one alternative will use all MAs

The preliminary alternatives were presented at a series of public meetings in June 2004. Many of the comments received during and after the meetings were incorporated into alternative design, and led to the final five alternatives that were brought forward for analysis in the DEIS.

The alternatives vary by how they:

- Display different combinations of recreation opportunities, potential recommended Wilderness, and recreation and ecological special areas
- Address the public's concerns about the amount of timber harvest, and the failure to meet currently planned harvest levels
- Address ecosystem approaches to management, focusing on ecological processes and landscape patterns
- Display different future combinations of plant and animal habitat across the Forest (this will vary by the amount of land allocated to each MA in the particular alternative)

Each alternative would maintain the habitat necessary to maintain viable populations of plant and animal species.

2.1.3 Changes between the Draft and Final Environmental Impact Statements

The Forest Service received well-prepared and constructive comments on the Proposed Revised Forest Plan and DEIS during the three-month public comment period. Both public and internal comments were considered in preparing the FEIS and 2006 Forest Plan.

Changes made to the Proposed Revised Forest Plan have been incorporated into the alternatives. No additional alternatives were included for detailed analysis in the FEIS. Changes made ranged from minor editing for improved clarity to changes in Forest Plan goals, objectives, standards, guidelines, and MA direction and allocation. Some changes resulted from data corrections, new survey information, and field verification. The following summary describes the most substantial changes made in the 2006 Forest Plan. A complete list of changes can be found in the FEIS planning record.

Public comments also identified the need for several improvements to the analysis and presentation of materials in the FEIS. As a result, editorial discrepancies, minor inconsistencies, or gaps in the presentation of information in the DEIS have been corrected in the FEIS. These changes are noted in the respective Forest Service responses in the FEIS Appendix H - Response to Comments.

CHANGES TO MANAGEMENT AREA ALLOCATIONS

Diverse Forest Use

Changes to the Diverse Forest Use management area increased this allocation from 116,737 acres (29%) to 118,717 acres (30%). The changes in the Diverse Forest Use management area allocations are:

Bingo Brook Area

The Bingo Brook area has been changed from a Diverse Backcountry (DB) management area to Diverse Forest Use (DFU) management area. This area has historically been harvested, is very accessible, roaded, and has much recreational use. The Bingo Brook area is adjacent to a large block of DFU management area. With the removal of the DB management area across the ridge, as described in the Monastery Mountain area changes, The Forest Service has decided that management would be enhanced and potential conflicts would be reduced by creating a larger block of DFU management area to include the Bingo Brook area.

Trues' Store Snowmobile Access
The Forest Service received public comment that the snowmobile access to Trues' Store from the VAST Trail near Little Pond in Woodford would have to be closed in the draft Preferred Alternative to be consistent with Remote Backcountry Forest management direction. Forest Service staff determined that this trail is also under a powerline corridor with an associated Special Use Permit. The area south of and including the powerline corridor in Woodford has been changed to a DFU management area to accommodate these two uses.

Remote Backcountry Forest

Changes to the Remote Backcountry Forest (RBF) management area decrease this allocation from 32,763 acres (8%) to 30,930 acres (8%). The changes to the RBF management area are:

Monastery Mountain Area
The Forest Service staff conducted field reconnaissance in the Diverse Backcountry (DB) management area that bisects the Remote Backcountry Forest (RBF) management area in the Monastery Mountain area. The DB management area corridor was allocated in the Preferred Alternative to allow for the possibility of a locally proposed east-west snowmobile corridor connecting the east side of the Green Mountain ridgeline with the VAST trails on the west side of the ridge. FS staff sited, hiked, and GPS located an approximate location for this trail that maintained the lowest gradient possible to cross the ridgeline. FS engineering staff then made a very preliminary estimate for the construction of a snowmobile trail. The estimated cost was $382,000. Based on the cost, steep slopes, and intensity of construction methods that would be necessary for this trail to be built, FS staff recommended that the trail would be out of character with the area and impractical to construct and maintain. Public comment received, most notably from the Green Mountain Club, also stated concerns about this potential snowmobile corridor, and a desire to have this area in a non-motorized use management area. Based on this information, the corridor has been changed from Diverse Backcountry management area to Remote Backcountry Forest. This change will provide greater protection to the Long Trail and create a large area of RBF management area along the ridge of the Green Mountains.

Dorset Mountain Area
The Forest Service received comments regarding the fact that we did not reach the stated 2006 Forest Plan objective to have 5% of all ecological types in an ecological reference network in the Preferred Alternative, and that future motorized use on Dorset Mountain was not desirable. The Forest Service met the 5% ecological reference network objective in Alternative D by allocating Dorset Mountain to the RBF management area. This area contains the rich transitional zone Ecological Land Unit Group (ELUG), the only ecological type that did not have at least 5% allocated to management that contributed to the ecological reference network. Further information has shown that the Dorset Mountain area has a semi-primitive non-motorized character and that much of the area is unsuitable for timber harvesting and is inaccessible. Based on this information, the Forest Service has decided to change the Dorset Mountain area to the RBF management area.

The decrease in Remote Backcountry Forest is due to additions to the recommended Wilderness Study Areas in the Glastenbury area described subsequently.

Remote Wildlife Habitat

Changes to the Remote Wildlife Habitat MA increase this MA allocation from 28,571 acres (7%) to 30,399 acres (8%). The changes to Remote Wildlife Habitat are:

Somerset Reservoir Area
The Forest Service received extensive comments on the lands around Somerset Reservoir. There was a desire to have no motorized use and no timber harvesting, and to place all this area in either a recommended Wilderness Study Area or the Remote Backcountry Forest (RBF) management area. Comments expressed concern over losing bear travel corridors in the Stratton, Dover,

Somerset, and Wardsboro area over Route 100. Other comments discussed the importance of the north end of Somerset Reservoir as wildlife habitat, and the significant wetland complexes near the reservoir. The majority of the lands to the east of the reservoir are in Remote Wildlife Habitat (RWH) management areas but the area to the northeast of the reservoir was Diverse Forest Use management area in the Preferred Alternative. This northeastern area has been changed to RWH management area, making the National Forest System (NFS) lands on the east side of the reservoir contiguous RWH management. In making this change, The Forest Service has considered the other uses around the reservoir on both NFS and non-NFS lands. The area around Somerset Reservoir has both motorized and non-motorized recreational use. Motor boats are also allowed on the reservoir at low speeds. Trans-Canada utility company owns most of the lands that directly surround Somerset Reservoir. These lands are governed by a 40-year Federal Energy Regulatory Commission (FERC) license agreed to by numerous governmental and non-governmental organizations, as well as a permanent easement held by the Vermont Land Trust. The license allows motorized recreation, requires a forest management plan, wildlife habitat improvements and recreational improvements. A more restrictive management area designation was not considered appropriate based on these uses.

Alpine Ski Areas

The Alpine Ski Area MA (178 acres) adjacent to Haystack Mountain has been changed to the Diverse Forest Use management area. The area is not under ski area permit and is not needed as part of the Haystack Ski Area.

Ecological Special Areas

Changes to the Ecological Special Areas (ESA) management area increase this allocation from 3,556 acres (1%) to 3,928 acres (1%). The changes to Ecological Study Areas are:

Grout Pond Area

Comments were received about the reduction of the size of the ESA management area at Grout Pond. These comments stated a desire to keep this area non-motorized and without harvesting in order to maintain the ecological and recreational character. The small size of the Grout Pond ESA described and mapped in the Draft EIS was an error, and did not include a sufficient area to protect the ecological values of the south end of the pond. The Forest Service has changed the Grout Pond ESA management area to extend to the height of land or trails around the pond. The Grout Pond ESA has increased from 121 acres in the draft Preferred Alternative to 424 acres in the Selected Alternative. The lands added to the Grout Pond ESA management area in the Selected Alternative were allocated to Diverse Forest Use management area in the draft Preferred Alternative.

French Hollow Area

Forest Service staff identified two new stands in the French Hollow area of Winhall with potential old growth characteristics. The Vermont Natural Heritage Program staff verified the existence of old growth characteristics in these stands. These stands, and additional stands connecting them to the French Hollow ESA management area, have been removed from the Diverse Forest Use management area and added to the French Hollow ESA management area already designated for old growth characteristics.

Wilderness Study Areas

Changes to the recommended Wilderness Study Area management area increase this MA allocation from 17,869 acres (4%) to 27,473 acres (7%). The changes to areas recommended as Wilderness Study Areas are:

Glastenbury

The Forest Service received comments regarding the condition of the Forest Service roads in the Bolles Brook area of Glastenbury. A field investigation was conducted to verify the condition of Forest Service system roads during which we discovered that the roads in this area were not improved roads. Due to this new information, the Bolles Brook area was added

to the Glastenbury Inventoried Roadless Area. The area was evaluated for wilderness potential, particularly the area's potential to enhance the quality of the Glastenbury recommended Wilderness Study Area (WSA) management area. Based on this evaluation, the Forest Service has decided to add the Bolles Brook area to the Glastenbury WSA management area. Once the area around Bolles Brook was added it provided an opportunity to extend the recommended Wilderness Study Area across the Appalachian Trail (AT). The Appalachian Trail Conservancy, who are partners in the management of the AT, stated in their comment letter that they supported the AT being in Wilderness. The Forest Service has decided to extend the Glastenbury WSA across the AT to the east. This change adds 9,604 acres to the Glastenbury recommended Wilderness Study Area changing the size of this WSA management area from 12,767 acres to 22,425 acres.

Blue Bank

The Forest Service received Forest Service staff comments on a WSA MA (Blue Bank Inventoried Roadless Area) on the west side of Breadloaf along FR 54. A private road access has been requested in this area because it is the only feasible access to a property. Making a minor boundary change by moving the boundary of the WSA management area from FR 54 to follow the stream east of FR 54 will allow for the needed access.

CHANGES TO GOALS AND OBJECTIVES

Goal 13

The Forest Service received public comment on the scope of the wilderness management goal (Goal 13), suggesting that "preserve biotic communities" cannot happen because communities are dynamic and change, and therefore, they cannot be preserved. The wording in the goal has been changed to clarify the intent to preserve an enduring resource that represents ecosystems and natural processes unique to the northeastern forests.

Objectives under Goal 2

The age class objectives have been clarified to be more consistent with desired conditions. The age class objective table has been revised so that the age class objectives only apply to those lands classified as suitable for timber production that will be managed under even-aged treatments in the five management areas that include regularly scheduled timber harvest. The percentage of suitable land to be managed using uneven-aged treatment has been increased to a minimum of 20 percent in response to public comments that the timber program on the GMNF should have a greater focus on uneven-aged management, and the re-examination of the type of treatments needed to reach desired vegetation objectives. Another reason for the higher objective for uneven-aged management is that some lands in Diverse Backcountry management area and Remote Wildlife Habitat management area, management areas using predominantly even-aged treatment due to a desire for long rotations, will be using uneven-aged treatments in some areas based on field conditions.

CHANGES TO STANDARDS AND GUIDELINES

Soil, Water, and Riparian Area Protection and Restoration

The Forest Service received comments that the wetland guidelines did not provide sufficient protection for wetlands, vernal pools and seeps. Concerns were also related to protecting habitat for amphibians and winter water areas for turkeys. The Soil, Water, and Riparian Standards and Guidelines (S&Gs) have been modified to provide greater clarity in the intended protection of wetlands including vernal pools and seeps. Seeps have been added to the definition of wetlands in the glossary. The guideline for wetlands now states that within 100 feet of a wetland activities should be limited to those that protect, maintain, and improve the condition of the riparian resource.

Wildlife

The standards and guidelines for Indiana bat roosting areas have been clarified in coordination with the United States Fish and Wildlife Service (USFWS) and the Vermont Department of Fish and Wildlife. These changes, based on comments from USFWS and new information, will provide more targeted direction on maintaining Indiana bat habitat. These changes aid future project design and streamline Endangered Species Act consultation.

Rare and Unique Biological Features

The level of detail and direction for rare plants provided in the Threatened, Endangered, and Sensitive (TES) amendment to the 1987 Forest Plan is greater than that provided in the Proposed Revised Forest Plan. The Proposed Revised Plan approach was taken for two reasons: 1) to avoid repeating direction provided in Forest Service Manual (FSM) 2760, and 2) to move detailed operational directions to a FSM supplement. We received comments expressing concern about the level of protection for species of concern that were not listed as threatened, endangered or sensitive. Forest Service staff examined the standards and guidelines and found that some of the standards and guidelines in the 1987 Forest Plan were not yet in the FSM Supplement direction. Without these S&Gs, we would have had to produce analyses on how each site-specific project could affect plants that are species of concern, and then develop mitigation to protect them. By changing the S&Gs to be more detailed we will be able to refer to the protection afforded these plants in the S&Gs.

The Forest Service received comments that the nesting season for peregrine falcons begins earlier than reflected in the Proposed Revised Forest Plan standards and guidelines. The standard to protect Peregrine Falcon nesting sites has been changed to begin on March 1 rather than March 15 in consultation with the Vermont Fish and Wildlife Department and a peregrine falcon expert. The guideline providing a nest site buffer zone has been extended to a minimum of 660 feet and that minimum distance may be extended on a case-by-case basis if needed to protect nesting birds.

Forest Service Staff raised the concern that the standards for Great Blue Heron, Northern Goshawk, and Osprey would require surveys for these species before any activity. Identifying “active” nests can be very problematic for goshawks, in particular, as they may have multiple nests that they are working on in any given year, and they can nest almost anywhere on the Forest. Forest Service staff reviewed potential situations in the field while considering the most effective procedures to protect nests when and where necessary. Based on this review the standards and guidelines for these species have been consolidated under one heading with three guidelines which pertain to all three species. This provides greater flexibility for Forest Service staff in project planning while protecting any nest found during management activities.

Recreation and Trails

In response to public and Forest Service staff concerns about continued recreation facilities and trail use in management areas where these activities were not consistent with the desired Recreation Opportunity Spectrum (ROS) class, the Forest-wide standard requiring that management areas be managed consistent with the ROS class has been removed. The ROS class is a Desired Condition and cannot always be attained but provides a direction toward which to manage. It is not always the best choice for all resources considered for the Forest Service to close trails and recreation facilities and relocate these sites. It is also not inconsistent with management area allocations to have some facilities that do not meet all of the desired conditions. The standard requiring management to be consistent with MA direction has been retained thus requiring management actions to be consistent with the DFC of a particular MA.

The Forest Service received public comment on standards and guidelines for mountain bike use. These comments expressed a concern that biking was allowed only on roads and trails designated for that use (“closed unless

designated open"). Forest Service roads that are posted open are not usually posted for particular uses, and most public roads are open to bicycles and horses. Past management for trails was based on 1987 Forest Plan management direction, patterns of use, resource concerns, management of potential user conflicts, and health and safety concerns. The standards and guidelines for bicycle and equestrian use have been changed to reflect management reality. Forest Service roads (classes 1 through 5) are open to bicycles, and saddle, pack, and draft animals unless posted closed. Bicycles, and saddle, pack, and draft animals will be allowed only on trails that are designated for that use. Trail use on the GMNF must be managed and the routes for various recreational trail uses need to be confined to trails designed and maintained for specific uses. The term mountain bike has been changed to the more generic term bicycle throughout the document to recognize the variety in types of bicycles used on the Forest

The Forest Service received many comments on the use of summer ORVs on the GMNF. These comments expressed concerns about potential resource damage and introducing summer ORV use could change the character and overall quality of recreational experiences. The Revised Forest Plan is far more restrictive than the 1987 Forest Plan in terms of the potential locations of summer ORV trails. The Proposed Revised Forest Plan limits summer ORV use to connecting corridors that link sections of a larger state-wide motorized trail system. The Forest Service has decided to continue with this direction for summer ORV use on the GMNF in the 2006 Forest Plan. The standards and guidelines for motorized use have been clarified and further restricted, and new standards and guidelines have been added to clarify the limited role the GMNF will play in providing summer ORV use. These changes include adding a standard prohibiting summer ORV trail heads and prohibiting the creation of an entirely or predominantly self contained summer ORV trail system on the GMNF.

CHANGES TO MANAGEMENT AREA DIRECTION

Remote Wildlife Habitat

The Forest Service received comments expressing concern that the Remote Wildlife Habitat (RWH) management area would prohibit desirable trail relocations or construction of missing trail segments of an existing trail system. We also received comments expressing concern that the creation of early successional habitat and permanent openings may be difficult due to the management direction for the Remote Wildlife Habitat management area. A number of changes were made to the RWH management area including changes in the major emphasis, desired condition, and standards and guidelines. These changes are intended to clarify that although recreation uses are to be de-emphasized in this management area, existing uses, particularly trail maintenance, relocations and completions may occur. The management area's focus on reclusive species has also been changed to focus more on the remote habitat provided for all species. The intent of the desired condition for the management area is to enhance permanent upland openings through timber and vegetation management and to maintain these openings as needed has been clarified.

CHANGES TO THE ENVIRONMENTAL IMPACT STATEMENT

Soil Analysis

The Forest Service received comments about the adequacy of our acid deposition, soil productivity, and land suitability analysis relative to timber harvest. Additional information provided by commenters was reviewed and discussed with subject matter experts to determine if any adjustments in the timber management approach were necessary. The Forest Service has added analysis to the soils section of the Final EIS on nutrient loss with respect to biomass removal and acid deposition. The Forest Service has considered

this additional information, along with the 2006 Forest Plan's standards and guidelines and monitoring approach, and does not see a need to change our initial determination of which lands are classified as suitable for timber production.

CHANGES TO APPENDICES

Roadless Inventory

Forest Service staff invested additional resources to further review some of the specific areas of concern expressed in comments on the roadless inventory. This review resulted in approximately 6,730 acres being added to the roadless inventory in three different roadless areas.

The Forest Service received comments on the condition of Forest Service system roads in the Bolles Brook area of Woodford and Glastenbury. Forest Service staff conducted field reconnaissance and found the roads did not fit the improved road definition. Due to this information, the Bolles Brook area was added to the Glastenbury Roadless Area. The acreage of this roadless area has changed from 42,511 acres to 43,645 acres, an increase of 1,134 acres.

The Austin Brook road corridor FR 25 was specifically excluded from the Breadloaf Wilderness designation in 1984 and for this reason was not included in our initial roadless inventory. Based on public comment regarding the linear nature of the road leading into a remote area, the area was added to the roadless inventory and was evaluated as a possible addition to the Breadloaf Wilderness.

The Forest Service received comments requesting the Forest Service to consider the Abbey Pond area's appropriateness to be considered as a Wilderness Study Area and that it be included in the roadless area inventory. Further analysis of the initial roadless inventory showed that the area was greater than 5,000 acres in size. Abbey Pond was added to the roadless inventory in response to new information regarding opportunities for solitude in the area. Further analysis indicated that the Abbey Pond area contained 1,800 acres of Semi-primitive Non-motorized (SPNM) ROS class, which the Forest Service judged to have sufficient solitude potential. In addition, the trail bisecting the area, originally believed to be an active snowmobile trail, was no longer being used as a snowmobile trail. Abbey Pond has been added to the roadless inventory and is a 5,453 acre stand-alone roadless area located on the north half of the Forest.

These changes have resulted in a total of 124,321 acres of inventoried roadless areas in 37 different areas of the Forest. The Forest Service has considered the additions to the original inventory, and has evaluated them relative to our overall management area allocations and proposals for Wilderness Study Areas. The Forest Service believes the Selected Alternative strikes a good balance in assigning these inventoried lands to various management allocations for the next ten to fifteen years.

Proclamation Boundary Maps

Changes to the Proclamation Boundary maps for Alternative E Modified were made to be consistent with changes in management area allocations. The area around National Forest System lands on Dorset Mountain was changed to the Remote Backcountry management area to provide the potential for a larger remote area should the Forest Service acquire the land. The lands on the east side of Somerset Reservoir, now owned by Trans Canada Corporation, were changed to the Remote Wildlife Habitat management area to provide for the potential of consistent management on most of the east side of the reservoir should the Forest Service acquire these lands.

2.1.4 Elements Common to all Alternatives

The five alternatives included for detailed analysis in the FEIS have a number of common elements.

Laws, Regulation, and Policies

All alternatives were designed to comply with applicable laws, regulations, and policies. For a complete list of laws, regulations, and policies, see Appendix E of the Revised Forest Plan. All of the alternatives:

- Meet other federal laws including, but not limited to:
  - National Forest Management Act
  - National Environmental Policy Act
  - Clean Water Act
  - Clean Air Act
  - Endangered Species Act

- Meet the minimum management requirements of 36 CFR 219.27. These requirements guide the development, analysis, approval, implementation, monitoring, and evaluation of forest plans, including:
  - Resource protection
  - Vegetative manipulations
  - Silvicultural practices
  - Even-aged management
  - Riparian areas
  - Soil and water protection
  - Diversity

- Meet relevant Vermont State and local laws

Forest Plan Management Direction

All alternatives include the same goals, objectives, and forest-wide standards and guidelines. The only exception are standards and guidelines associated with Land Ownership Adjustment under Alternative A since it would retain the 1987 Forest Plan direction for newly acquired lands. A detailed description of the goals, objectives, and Forest-wide standards and guidelines can be found in Chapter 2 of the 2006 Forest Plan.

Monitoring and Evaluation Plan

All alternatives would include the same Monitoring and Evaluation Plan as described in Chapter 4 of the 2006 Forest Plan.

Management Areas

The alternatives allocate land among different Management Areas (MAs). Each alternative includes a different combination of MA acres applied in varied spatial patterns. Each MA has a unique emphasis, desired condition of the land, and standards and guidelines. A detailed description for each MA can be found in Chapter 3 of the 2006 Forest Plan. The following list provides a brief summary of the purpose for each MA. Unless otherwise noted, each MA is included in all alternatives.

MA 3.1 Diverse Forest Use

The emphasis of this MA is a variety of forest uses. Vegetation management emphasis is placed on production of high quality sawtimber and other timber products on a sustained yield basis. Management actions provide a mix of habitats for wildlife species, including deer wintering habitat. Public use is managed to provide a full range of recreation opportunities, from motorized and non-motorized trails to dispersed campsites and developed campgrounds. The mix of vegetation conditions and recreation opportunities across the landscape provides a mosaic of landscape conditions that strives to be visually attractive to people visiting the Forest.

MA 5.1 Wilderness

The Wilderness MA emphasizes the management and protection of congressionally designated wilderness areas. The existing wilderness areas include Bristol Cliffs, Breadloaf, Big Branch, Peru Peak, Lye Brook, and George D. Aiken. Lye Brook Wilderness is also a Class I Air Quality Area. Management emphasizes the maintenance of wilderness

values consistent with the Wilderness Act of 1964 and subsequent legislation.

MA 6.1 Remote Backcountry Forest

The Remote Backcountry Forest MA emphasizes large expanses of relatively natural landscapes where terrestrial and aquatic ecosystems develop under natural disturbance regimes. Management actions are limited to those that help restore or maintain natural processes, natural communities, and associated species within their natural ranges of variation in the landscape. Public use is managed at a scale and intensity that either helps keep species or processes within their natural range of variation, or has minimal effect on the area's natural integrity. Non-motorized recreational opportunities will be available that provide a relative sense of isolation and remoteness in a predominantly natural or natural-appearing landscape.

MA 6.2 Diverse Backcountry

The Diverse Backcountry MA emphasizes relatively large landscapes that provide a mix of backcountry recreational experiences from low use foot trails to motorized use trails. Longer rotations for timber harvesting of 150 years or more providing a more mature appearing forest are also emphasized. The management area will also provide a mix of wildlife habitats supplied by more mature forests, early successional forests, and both permanent upland and temporary openings. A predominantly natural or natural-appearing environment characterizes the area.

MA 6.3 Remote Wildlife Habitat (Alternatives B through E)

The major emphasis of the Remote Wildlife Habitat MA is to provide a mix of different-aged forest habitats, from early succession to old forests, for the primary benefit of diverse wildlife species, including reclusive wildlife species. This MA creates diverse habitats, including permanent upland and temporary openings and brushy areas that complement wildlife habitat management in other management areas. Recreation uses are de-emphasized to minimize continuing disturbance to wildlife.

MA 7.1 Alpine Ski Areas

The major emphasis of the Alpine Ski Areas MA is to provide year-round recreation opportunities at the three alpine ski areas managed by the private sector under Special Use permit authority.

MA 8.1 Appalachian National Scenic Trail

The major emphases of this MA include:

1. Manage the segments of the Appalachian National Scenic Trail (AT) on federal lands that traverse the State of Vermont and the Green Mountain National Forest
2. Provide for the conservation and enjoyment of the nationally significant scenic, historic, natural, and cultural qualities of the land through which the AT passes
3. Provide opportunities for high quality outdoor recreation experiences, including a sense of "wildness"
4. Recognize and strengthen the level of partnership, cooperation, and volunteer efforts integral to AT management

MA 8.2 Long Trail

The major emphases of this MA include:

1. Manage the segments of the Long National Recreation Trail (LT) on federal lands within the Green Mountain National Forest
2. Provide for the conservation and enjoyment of the significant scenic, historic, natural, and cultural qualities of the land through which the LT passes
3. Provide opportunities for high-quality outdoor recreation experiences, including a sense of "wildness"
4. Recognize and strengthen the level of partnership, cooperation, and volunteer efforts integral to LT management

MA 8.3 White Rocks National Recreation Area

The White Rocks National Recreation Area (NRA) was established by Public Law 98-322 for the purpose of preserving and protecting "existing wilderness and wild values and to promote wild forest and aquatic habitat for wildlife, watershed protection, opportunities for primitive and semi-primitive recreation, and scenic, ecological, and scientific values." The White Rocks NRA also includes the Big Branch and Peru Peak Wilderness areas. The emphasis of this MA is to attain the purpose of the public law in the lands that are not included in Wilderness.

MA 8.4 Alpine/Subalpine Special Area (Alternatives B through E)

The Alpine/Subalpine Special Area MA emphasizes recognition, conservation, and interpretation of the alpine and subalpine zone, and its associated ecological values, along the northern Green Mountain ridgeline. This habitat is particularly fragile and vulnerable on the National Forest. It represents the southern-most extension of these communities in Vermont, and is of limited extent.

MA 8.5 Green Mountain Escarpment (Alternatives B through E)

The Green Mountain Escarpment MA emphasizes management of natural communities along the Green Mountain escarpment. The Green Mountain escarpment is a landscape that falls between the eastern edge of the Champlain and Vermont Valleys and the crest of the cliffs and steep slopes that form the western edge of the Green Mountains and the National Forest. Several natural communities found in this landscape are rare or uncommon, and provide habitat for trees, herbs, and ferns considered rare or uncommon on the Forest or within the State. Emphasis is on management to maintain natural community diversity and to maintain or enhance populations of rare or uncommon plant and animal populations.

MA 8.6 Existing and Candidate Research Natural Areas

The emphasis for an existing or candidate Research Natural Area (RNA) MA is preservation and protection of ecologically significant natural features, high-quality representative ecosystems, and/or unique areas. In combination with other RNAs in the nation, these form a national network of ecological areas for research, monitoring, education, and maintenance of biological diversity. A broad representation of natural communities is included in this MA. In this document, the term RNA will refer to both Existing and Candidate Research Natural Areas.

MA 8.7 Ecological Special Areas

Ecological Special Areas (SAs) are characterized by physical or biological features of Forest-wide or regional significance. Areas that may be designated as Ecological SAs include locations that provide examples, or representatives of geological, botanical, zoological, and ecological values. Management in this MA emphasizes the protection of these values and opportunities for public use and interpretation. Ecological SAs may also provide opportunities as reference sites for research and monitoring.

MA 8.8 Recreation Special Areas

Recreation Special Areas (RSAs) are characterized by recreational values that require special management prescriptions to sustain. Management in this MA emphasizes the protection of these values and opportunities for public use.

MA 8.9 Moosalamoo Recreation and Education Area (Alternatives C and E)

The Moosalamoo Recreation and Education Area MA emphasizes public use, interpretation and education; and the protection of the special values and attributes of the area that contribute to public enjoyment. Major emphasis areas include: 1) Providing a showcase for National Forest multiple use management, 2) Providing

outstanding educational and interpretation opportunities in the areas of ecological processes and forest management, 3) Providing for public enjoyment of the area for outdoor recreation and other benefits, and 4) Managing for the other resource values present in the area, in a manner that is consistent with public recreation values and other special attributes of the area.

MA 9.2 Newly Acquired Lands (Alternative A Only)

This management area is fully described in the 1987 Plan. The major emphasis of the Newly Acquired Lands MA is to protect the natural resources and management options of newly acquired lands until studies are done to determine the desired future condition of these lands. Management activities are limited to the protection and inventory of existing resources and facilities until such studies are complete and a decision can be made.

MA 9.3 Alpine Ski Area Expansion

The Alpine Ski Area Expansion MA recognizes the potential need for ski area expansion. Land would be managed so as not to preclude future ski area development.

MA 9.4 Eligible Wild, Scenic, and Recreational Rivers (Alternatives B through E)

The emphasis of this MA is to protect and enhance the "outstandingly remarkable values" that led those rivers and streams within this MA to be determined as eligible Wild, Scenic, and Recreational Rivers. Included in this MA are river segments and their associated corridors that are eligible to be further considered for addition to the National Wild and Scenic River System. Once determined eligible, river segments are tentatively classified for study as either wild, scenic, or recreational based on the degree of access and amount of development along the river. Management under this MA retains a river's eligibility for the stated potential classification. River corridors contained within this MA are one quarter mile on each side of the stream.

MA 9.4 Significant Streams (Alternative A Only)

This management area is fully described in the 1987 Plan. The major emphasis of this MA is to protect the character of land and water resources that may make certain sections of 11 rivers eligible for inclusion in the National Wild, Scenic, and Recreational River system. The prescription for potential Recreational Rivers is also applied to 38 other potentially eligible river sections (significant streams).

MA 9.5 Wilderness Study Areas (Alternatives B through E)

This MA provides for the management and protection of Wilderness Study Areas (WSAs). The focus would be on managing these areas to protect wilderness characteristics pending legislation as to their classification, as well as providing existing uses where compatible with protecting wilderness character.

2.1.5 Alternatives Considered in Detail

Five alternatives are analyzed in detail in the FEIS including the "no-action" (current management) alternative. The discussion of each alternative:

- Provides a general overview of each alternative
- Discusses how each alternative addresses the major Plan revision issues
- Lists the acres and percentages of land in each Management Area

Alternative A (Current Management)

General Overview of Alternative A

Alternative A is the "no-action" alternative for this FEIS. This alternative serves as the baseline for comparison of the other alternatives. "No-action" for purposes of this analysis is considered "no change" from current

management direction provided in the 1987 Forest Plan. It reflects the current level of goods and services provided by the Forest and the most likely amount of goods and services expected to be provided in the future if current management direction continues. Most of the same changes identified for the other alternatives specific to the goals, objectives, standards and guidelines, and management area direction have been incorporated into Alternative A in order to reflect necessary improvements to the Forest Plan identified through monitoring since 1987. Alternative A as described is consistent with the level of management intensity envisioned under the 1987 Forest Plan.

Alternative A Highlights

- More than 90,000 acres of newly acquired lands (MA 9.2) are not allocated to management areas in order to provide a true baseline alternative
- Maintains Significant Streams in a special management area and does not use the information on Wild, Scenic and Recreational Rivers (WSR) provided by the study completed for Plan Revision
- No new Wilderness Study Areas, other special areas (Green Mountain Escarpment, Alpine/subalpine, and Moosalamoo Recreation and Education Area MAs), or Remote Wildlife Habitat MAHow Alternative A addresses the issues

Table 2.1-1 shows the distribution of MAs in Alternative A.

Table 2.1-1: GMNF Alternative A Management Area Acres

Management Area	**Alt. A** Current Management **Acres (%)**
Diverse Forest Use	110,271 (28%)
Diverse Backcountry	85,139 (21%)
Remote Wildlife Habitat	0
Escarpment	0
Remote Backcountry	8,316 (2%)
Wilderness	59,001 (15%)
Wilderness Study Area	0
National Recreation Area	22,758 (6%)
Appalachian Trail	*14,473 (4%)
Long Trail	*2,927 (1%)
Recreation Special Areas	86 (<1%)
Moosalamoo Recreation and Education Area	0
Alpine Ski Areas	2,822 (1%)
Alpine Ski Area Expansion	554 (<1%)
Existing and Candidate Research Natural Areas	1,546 (<1%)
Ecological Special Areas	796 (<1%)
Alpine/Subalpine Special Area	0
Eligible Wild, Scenic, and Recreational Rivers[1]	0
Significant Streams[1]	45,538
Newly Acquired lands	92,003 (23%)

Source: GMNF GIS Alternative A Management Area Layer
‡ Notes: Total Forest acreage: ~400,000
*Does not include portions of the Appalachian and Long Trail Management Areas that intersect congressionally designated Wilderness & National Recreation Areas as shown on Alternative A maps
[1] Management Area applies to stream corridors (1/4 mile each side of stream) which overlay and run through all other management areas.

Special Designations

- WILDERNESS – Alternative A would not provide additional Wilderness Study Areas, nor would it adjust any of the existing Wilderness MA boundaries by adding small, adjoining parcels.
- WILD & SCENIC RIVERS – Alternative A would maintain the Significant Streams MA with 11 Eligible Rivers and 38 Significant Streams. The Forest Service completed a study to determine the eligible Wild, Scenic, and Recreational Rivers during Plan revision and has identified 20 rivers to be eligible. Of these 20 rivers, only the rivers already included in the Significant Streams MA would be managed as such in Alternative A.
- SPECIAL AREAS – Alternative A would maintain the existing level of Special Area MAs and would not add any new Special Areas. Boundaries of Special Areas would be adjusted in order to correct mapping errors in the 1987 Plan.
- NATIONAL RECREATION AREA – Alternative A would not propose any increase in the National Recreation Area MA.

Biodiversity & Ecosystem Management

Biodiversity and ecosystem management concerns are addressed through goals, objectives, standards and guidelines. The Diverse Forest Use and Diverse Backcountry MA standards and guidelines would improve biodiversity and ecosystem management in Alternative A by allowing greater flexibility in vegetative treatments on a substantial number of acres.

Social & Economic Concerns

Alternative A would provide the same social and economic opportunities currently provided on the GMNF. These opportunities include a mix of recreational opportunities, tourism, timber production, and other economic benefits.

Recreation Management

Under Alternative A, recreational opportunities and management would remain very much as they presently are in the 1987 Plan. Trails and roads located in more than 90,000 acres of newly acquired lands (MA 9.2) that are not on the Forest Service system would continue to receive only minimal or no maintenance.

Timber Management

Under Alternative A, timber management opportunities would be slightly improved. The change to Diverse Forest Use and Diverse Backcountry MAs would improve timber management by allowing greater flexibility for using the best vegetation management practices in the most appropriate locations. More than 90,000 acres of newly acquired lands (MA 9.2) would not be assigned a MA. Many of these lands are tentatively suitable for timber production but continue in a management area that would not allow harvesting.

Alternative B

General Overview of Alternative B

The following factors were used to guide the development of Alternative B:

- Increase timber and wildlife habitat management
- Accommodate a wide range of uses
- Increase early successional age composition of forest community types
- Produce high quality saw timber
- Increase ecosystem-based management and emphasize conservation of biodiversity.

This alternative would emphasize an increase in the amount of early successional habitat for wildlife species. The production of high-quality saw timber would also be emphasized in Alternative B.

Table 2.1-2 shows the distribution of management areas in Alternative B.

Table 2.1-2: GMNF Alternative B Management Area Acres

Management Area	Alt. B Acres (%)
Diverse Forest Use	195,403 (49%)
Diverse Backcountry	59,193 (15%)
Remote Wildlife Habitat	12,115 (3%)
Escarpment	2,894 (1%)
Remote Backcountry	22,163 (6%)
Wilderness	59,001 (15%)
Wilderness Study Area	2,291 (1%)
National Recreation Area	22,758 (6%)
Appalachian Trail	14,315 (4%)
Long Trail	2,640 (1%)
Recreation Special Areas	157 (<1%)
Moosalamoo Recreation and Education Area	0
Alpine Ski Areas	3,067 (1%)
Alpine Ski Area Expansion	518 (<1%)
Existing and Candidate Research Natural Areas	471 (<1%)
Ecological Special Areas	3,000 (1%)
Alpine/Subalpine Special Area	706 (<1%)
Eligible Wild, Scenic, and Recreational Rivers[1]	24,743
Significant Streams[1]	0
Newly Acquired lands	0

Source: GMNF GIS Alternative B Management Area Layer
‡ Notes: Total Forest acreage: ~400,000
[1] Management Area applies to stream corridors (1/4 mile each side of stream) which overlay and run through all other management areas.

Alternative B Highlights

- Emphasizes active management
- Large areas of forest that allow for flexible timber management
- Greater opportunities for timber production
- Active management is emphasized to provide biodiversity
- Greater opportunities for motorized recreation and recreation that requires road access

How Alternative B addresses the issues

Special Designations

- WILDERNESS – Alternative B would provide for small additions to one existing Wilderness area through proposed Wilderness Study Area MAs. The focus of these additions would be to improve the boundary management of the existing Wilderness areas. New stand alone Wilderness Study Area MAs would not be proposed in Alternative B.
- WILD & SCENIC RIVERS – Twenty rivers have been determined to be eligible but none have been analyzed for suitability. These 20 rivers would be managed as the Eligible Wild, Scenic and Recreational Rivers MA under this alternative.
- SPECIAL AREAS – The same Special Area MA corrections would be made in Alternative B as would be made in Alternative A. Two areas of the Escarpment land type association have been proposed as Special Area MAs. These areas of the Escarpment contain rare natural communities. The Mount Abraham Special Area MA would be expanded to include the Lincoln Peak alpine/subalpine area to provide for biodiversity on the GMNF. The Mount Horrid Special Area MA would also be expanded. Alternative B would add Special Areas MAs in the newly acquired lands (MA 9.2) as well as a number of other Special Area MAs to provide additional protection for ecologically important resources.
- NATIONAL RECREATION AREA – Alternative B would not propose any increase in the National Recreation Area MA.

Biodiversity & Ecosystem Management

Alternative B would emphasize more active management in providing biodiversity. The increased amount of Diverse Forest Use would provide for flexibility to allow management that is appropriate to the conditions on the ground. Wilderness and additional proposed Remote Backcountry MAs would provide areas where vegetation management would not occur, allowing for development of potential old growth. A few remote areas have been proposed as Remote Wildlife MAs, which would specifically provide for habitat management benefiting reclusive species. Many rare natural communities would be protected in Special Areas MAs.

Social & Economic Concerns

Alternative B would provide greater opportunities to maintain the working landscape of Vermont, as well as many recreational opportunities. This alternative would benefit businesses and communities which depend on timber harvesting and its related manufacturing and service jobs. It would also benefit the tourism and recreation-related sectors that are focused on a more developed and active recreation environment.

Recreation Management

A higher level of recreation that requires road access would be provided in this alternative. Much of the GMNF is in the Diverse Forest Use MA that allows for developed recreation, roads, and motorized trails. There are also a number of areas that provide backcountry motorized opportunities. Areas that provide less accessible, remote, non-motorized opportunities would be more limited in Alternative B.

Timber Management

Alternative B would provide the greatest opportunities and flexibility for timber management. A majority of the Forest is in MAs that allow for commercial timber harvesting and vegetation management for ecosystem and wildlife benefits. The Diverse Forest Use MA provides for flexibility in the type of management dependent on the desired vegetation composition. Most of the newly acquired lands (MA 9.2) were allocated to MAs that allow harvesting. The Green Mountain Escarpment MA provides opportunities to manage vegetation specifically to maintain ecosystems that require disturbance such as oak and pine. There has been a small increase in the Wilderness and Remote Backcountry MAs that do not allow timber management.

Alternative C

General Overview of Alternative C

The following factors were used to guide the development of Alternative C:

- Provide a wider range of recreational experiences
- Provide more areas with mature forest
- Increase ecosystem-based management and emphasize conservation of biodiversity
- Improve tourism opportunities

Alternative C would place an emphasis on a variety of remote recreational opportunities and longer rotation periods for timber harvesting.

Alternative C Highlights

- Greater opportunities for remote motorized and non-motorized recreation
- Proposes Moosalamoo Recreation and Education Area
- Portions of Glastenbury and Worth Mountain are proposed as Wilderness Study Areas
- Small additions to existing Wilderness areas are proposed in order to improve boundary management
- Most significant special areas added to Special Area MA to maintain biodiversity

Table 2.1-3 shows the distribution of management areas in Alternative C.

Table 2.1-3: GMNF Alternative C Management Area Acres

Management Area	Alt. C Acres (%)
Diverse Forest Use	120,778 (30%)
Diverse Backcountry	94,497 (24%)
Remote Wildlife Habitat	5,723 (1%)
Escarpment	8,488 (2%)
Remote Backcountry	23,220 (6%)
Wilderness	59,001 (15%)
Wilderness Study Area	29,360 (7%)
National Recreation Area	22,758 (6%)
Appalachian Trail	14,315 (4%)
Long Trail	2,511 (1%)
Recreation Special Areas	157 (<1%)
Moosalamoo Recreation and Education Area	12,702 (3%)
Alpine Ski Areas	3,067 (1%)
Alpine Ski Area Expansion	518 (<1%)
Existing and Candidate Research Natural Areas	471 (<1%)
Ecological Special Areas	2,420 (1%)
Alpine/Subalpine Special Area	706 (<1%)
Eligible Wild, Scenic, and Recreational Rivers[1]	24,743
Significant Streams[1]	0
Newly Acquired lands	0

Source: GMNF GIS Alternative C Management Area Layer
‡ Notes:
Total Forest acreage: ~400,000
[1] Management Area applies to stream corridors (1/4 mile each side of stream) which overlay and run through all other management areas.

How Alternative C addresses the issues

Special Designations:

- WILDERNESS – Alternative C proposes additions to existing Wilderness areas through Wilderness Study Area MAs to improve boundary management. Alternative C also proposes two new Wilderness Study Area MAs, one in Glastenbury on the west side of the Appalachian Trail corridor and the other along the high peaks of Worth Mountain, Monastery Mountain, and Philadelphia Peak.
- WILD & SCENIC RIVERS – Twenty rivers have been determined to be eligible but none have been analyzed for suitability. These 20 rivers would be managed as the Eligible Wild, Scenic and Recreational Rivers MA under this alternative.
- SPECIAL AREAS – The same Special Area MA corrections that are proposed to be made in Alternative A would be made in Alternative C. The new Special Areas that are proposed to be added in Alternative B would also added in Alternative C unless they are in a protective management area such as the Remote Backcountry MA.
- NATIONAL RECREATION AREA – Alternative C would not propose any increase in acreage in the National Recreation Area MA.
- MOOSALAMOO RECREATION AND EDUCATION AREA – A new MA, Moosalamoo Recreation and Education Area MA, would be proposed under this alternative. This MA would address the interest in recreational diversity, environmental and heritage education, and tourism in the area.

Biodiversity & Ecosystem Management

Alternative C would include more MAs that do not allow for timber management, such as Remote Backcountry or Wilderness Study Area MAs. It would also include larger areas that would be managed for longer rotations and more mature forests. This would decrease the

amount of early successional growth and increase mature and old forest areas. Most rare natural communities are protected in Special Areas.

A number of areas are proposed to be managed as Remote Wildlife Habitat MAs, which allows timber management that is designed to support reclusive wildlife species.

Social & Economic Concerns

Alternative C would maintain or enhance recreational opportunities that occur on the GMNF, and this would benefit many of the businesses that depend on recreation and tourism. Recreational and cultural benefits on which area communities rely, particularly through the White Rocks NRA and the proposed Moosalamoo Recreation and Education Area, would likely be maintained or increase. The social desire for additional wilderness is also addressed. This alternative would benefit timber-based economies and maintenance of Vermont's working landscape.

Recreation Management

A balanced range of recreational opportunities would be provided through Alternative C. Areas that provide road access would remain the same and areas without roads would be predominantly placed in Remote Backcountry or Remote Wildlife Habitat MAs. This would provide greater opportunities for non-motorized recreational activities. Remote motorized recreational opportunities would also be emphasized in Alternative C. Additional Wilderness Study Area MAs would provide increased opportunities for solitude and challenge on the GMNF.

Timber Management

Alternative C would allocate more areas with longer rotation periods making available more areas of mature forest. It would also include many areas with restricted or no timber harvesting providing for future old growth areas. Under this alternative, approximately thirty percent of the Forest would be allocated to the Diverse Forest Use MA, meaning fewer areas would provide for flexible timber management. The Moosalamoo Recreation and Education Area MA would also provide opportunities for flexible timber management, as well as an emphasis on forestry demonstration areas. The Green Mountain Escarpment MA would provide opportunities to manage vegetation specifically to maintain vegetation types, such as oak and pine that require disturbance. Alternative C would also provide for areas that have timber management designed to benefit reclusive species in the Remote Wildlife MA.

Alternative D

General Overview of Alternative D

The following factors were used to guide the development of Alternative D:

- Increase ecosystem-based management and emphasize conservation of biodiversity
- Increase mature/old forest
- Maintain representatives of most natural communities in areas with minimal management
- Restore and protect rare and uncommon ecosystems while providing for a range of other uses

Alternative D Highlights

- Most of the Escarpment is a special area
- Representatives of most natural communities included in a special area or Remote Backcountry Forest
- Larger portions of Glastenbury and Worth Mountain are proposed as Wilderness Study Areas
- Larger number of areas for remote wildlife habitats
- Fewer areas with flexible, more intensive timber management

How Alternative D addresses the issues

Special Designations:

- WILDERNESS – Alternative D would provide for similar small additions to existing Wilderness areas through Wilderness Study Areas MAs as those proposed in Alternative C. Two new Wilderness Study Area MAs are proposed in this alternative, Glastenbury and Worth Mountain. The proposed Glastenbury area includes much of the Glastenbury Inventoried Roadless Area south of the MacIntyre Trail. The proposed wilderness in the Worth Mountain area includes most of the Worth Mountain Inventoried Roadless Area. These areas would provide substantial increases to the GMNF's Wilderness MAs, if designated.
- WILD & SCENIC RIVERS – Twenty rivers have been determined to be eligible but none have been analyzed for suitability. These 20 rivers would be managed as the Eligible Wild, Scenic and Recreational Rivers MA under this Alternative.
- SPECIAL AREAS – Boundary inaccuracies have been corrected and the Special Areas that are proposed to be added in Alternative C would also be added in Alternative D. In this alternative the majority of the Escarpment would be included as a Special Area. This would provide the greatest capacity for restoration and maintenance of the Escarpment's natural communities. Most of the areas of the Escarpment that are not Special Areas would be included in existing Wilderness or Wilderness Study Areas. Some Special Areas would be expanded or connected to enhance the ecosystems.
- NATIONAL RECREATION AREA – Alternative D would not propose any increase in the National Recreation Area MA.

Table 2.1-4 shows the distribution of management areas in Alternative D.

Table 2.1-4: GMNF Alternative D Management Area Acres

Management Area	Alt. D Acres (%)
Diverse Forest Use	104,027 (26%)
Diverse Backcountry	59,082 (15%)
Remote Wildlife Habitat	42,187 (11%)
Escarpment	17,710 (4%)
Remote Backcountry	23,036 (6%)
Wilderness	59,001 (15%)
Wilderness Study Area	49,799 (12%)
National Recreation Area	22,758 (6%)
Appalachian Trail	12,790 (3%)
Long Trail	1,801 (<1%)
Recreation Special Areas	157 (<1%)
Moosalamoo Recreation and Education Area	0
Alpine Ski Areas	3,067 (1%)
Alpine Ski Area Expansion	518 (<1%)
Existing and Candidate or Research Natural Areas	471 (<1%)
Ecological Special Areas	3,582 (1%)
Alpine/Subalpine Special Area	706 (<1%)
Eligible Wild, Scenic, and Recreational Rivers[1]	24,743
Significant Streams[1]	0
Newly Acquired lands	0

Source: GMNF GIS Alternative D Management Area Layer
‡ Notes:
Total Forest acreage: ~400,000
[1] Management Area applies to stream corridors (1/4 mile each side of stream) which overlay and run through all other management areas.

Biodiversity & Ecosystem Management

Alternative D would maintain a mix of viable native and desirable non-native plant and animal species and natural communities. It would provide for large contiguous areas with habitat restoration activities. Areas surrounding these large contiguous areas would have more intensive management and habitat creation, and provide connections to important areas. To the extent possible, representatives of most natural communities would be included in Remote Backcountry and Special Area MAs. A number of areas are proposed to be managed as Remote Wildlife Habitat which allows timber management to enhance early successional habitat and is designed to support reclusive wildlife species. Additional Wilderness would also provide areas without vegetative or habitat management.

Social & Economic Concerns

Maintenance of biodiversity and natural communities is considered important by most area communities. Alternative D addresses social desires for additional wilderness, less intensive management, increased ecosystem-based management, and enhanced tourism. Nature and wildlife-oriented businesses could benefit from Alternative D. Timber-related economic aspects would benefit through the restoration and maintenance of some habitats and natural communities.

Recreation Management

Recreation opportunities provided in this alternative would lean toward the more remote non-motorized types of activities. Improvements in habitat and biodiversity should increase opportunities for nature and wildlife-oriented activities such as photography, viewing, and hunting. The proposed increase in remote areas and wilderness would also provide greater opportunities for solitude and challenge. Alternative D would emphasize remote, non-motorized recreation and would de-emphasize motorized recreation.

Timber Management

Timber management in Alternative D would primarily be focused on ecosystem and habitat maintenance and restoration. The Green Mountain Escarpment MA includes the most acres in this alternative, maximizing opportunities to manage vegetation specifically to maintain ecosystems that require disturbance methods, including timber harvesting.

Alternative E – Selected Alternative

General Overview of Alternative E

The following factors were used to guide the development of Alternative E:

- Provide a range of uses evenly distributed across the forest
- Increase ecosystem-based management and emphasize conservation of biodiversity
- Provide a range of timber management areas
- Provide a diverse range of recreational opportunities

Alternative E would emphasize a mix of opportunities in recreation, timber management, wildlife habitat management, and ecosystem management.

Alternative E Highlights

- Provides a mix of flexible timber management and longer rotation periods
- Focuses most active types of management in the most accessible areas
- Proposes a arger area of Glastenbury than Alternative C as a recommended Wilderness Study Area
- Allocates much of the Escarpment as a special area
- Proposes Moosalamoo Recreation and Education Area
- Provides a mix of remote areas for recreation and wildlife habitat

Table 2.1-5 shows the distribution of management areas in Alternative E.

Table 2.1-5: GMNF Alternative E Management Area Acres

Management Area	Alt. E Acres (%)
Diverse Forest Use	118,717 (30%)
Diverse Backcountry	59,665 (15%)
Remote Wildlife Habitat	30,399 (8%)
Escarpment	14,436 (4%)
Remote Backcountry	30,930 (8%)
Wilderness	59,001 (15%)
Wilderness Study Area	27,473 (7%)
National Recreation Area	22,758 (6%)
Appalachian Trail	13,629 (3%)
Long Trail	2,640 (1%)
Recreation Special Areas	157 (<1%)
Moosalamoo Recreation and Education Area	12,375 (3%)
Alpine Ski Areas	2,889 (1%)
Alpine Ski Area Expansion	518 (<1%)
Existing and Candidate Research Natural Areas	471 (<1%)
Ecological Special Areas	3,928 (1%)
Alpine/Subalpine Special Area	706 (<1%)
Eligible Wild, Scenic, and Recreational Rivers[1]	24,743
Significant Streams[1]	0
Newly Acquired lands	0

Source: GMNF GIS Alternative E Modified Management Area Layer
‡ Notes: Total Forest acreage: ~400,000
[1] Management Area applies to stream corridors (1/4 mile each side of stream) which overlay and run through all other management areas.

How Alternative E addresses the issues

Special Designations:

- WILDERNESS – Alternative E would provide for similar small additions to existing Wilderness areas through Wilderness Study Area MAs that are proposed in Alternative C and D. It proposes a portion of Glastenbury inventoried roadless area as a Wilderness Study Area MA.
- WILD & SCENIC RIVERS – Twenty rivers have been determined to be eligible but none have been analyzed for suitability. These 20 rivers would be managed as the Eligible Wild, Scenic and Recreational Rivers MA under this alternative.
- SPECIAL AREAS – Boundary inaccuracies have been corrected and the Special Areas that were proposed to be added in Alternative C and D would also be added in Alternative E. A large portion of the Escarpment would be included as a Special Area. This would provide a similar capacity for restoration and maintenance of the Escarpment's natural communities as Alternative D. Other special areas would be expanded or connected to enhance the ecosystems.
- NATIONAL RECREATION AREA – Alternative E would not propose any increase in the National Recreation Area MA.
- MOOSALAMOO RECREATION AND EDUCATION AREA – Alternative E proposes a new MA, Moosalamoo Recreation and Education Area. This management area would address the interest in recreational diversity ecological and heritage education, and tourism in the area.

Biodiversity & Ecosystem Management

Alternative E would maintain a mix of viable native and desirable non-native plant and animal species as well as natural communities. It would provide for large contiguous areas with habitat restoration and creation activities. A number of large remote areas would be managed for remote wildlife habitat and more reclusive species. More accessible areas would be managed to provide early successional habitats. Representatives of many natural communities would be included in Remote Backcountry Forest, Remote Wildlife

Habitat and Special Area MAs. Additional Wilderness Study Areas would potentially provide areas without vegetative or habitat management.

Social & Economic Concerns

This alternative would provide a range of opportunities to address social and economic concerns. It would provide areas for timber harvesting and high quality sawtimber. Alternative E would also provide a range of recreational opportunities from motorized/developed recreation to non-motorized/remote recreation. Additionally, it would provide many of the recreational and cultural benefits on which area communities rely, particularly the White Rocks NRA and the proposed Moosalamoo Recreation and Education Area. The social desire for additional wilderness and the maintenance of natural communities and biodiversity is addressed. These opportunities also address the economic desire to enhance tourism opportunities.

Recreation Management

Alternative E would provide a relatively balanced range of recreational opportunities and settings. It would provide opportunities for remote types of recreation including motorized and non-motorized. Additional proposed Wilderness would provide opportunities for solitude, but less than that proposed in Alternative D. Alternative E would provide moderate opportunities for motorized/developed recreation in accessible areas.

Timber Management

Alternative E would provide a range of timber management opportunities. It would include less area with the flexible timber management of the Diverse Forest Use MA. Diverse Forest Use MAs would be located in the most accessible areas providing for efficient harvesting. The Green Mountain Escarpment MA would be larger in this alternative than that proposed in Alternatives A, B or C. This would therefore increase opportunities to manage vegetation specifically to maintain ecosystems that require disturbance methods, including timber harvesting. More areas would be focused on wildlife habitat creation, maintenance of natural communities, and longer rotations. These areas would be located in less accessible parts of the GMNF.

2.1.6 Alternatives Eliminated from Detailed Study

Several alternatives were considered by the Forest Service in response to public comments and related issues. This section identifies those alternatives and briefly discusses why they were not analyzed in detail in this FEIS.

No Timber Harvest

This alternative was considered to address the public issue regarding the amount of timber harvesting that should be allowed, but more specifically, whether timber harvesting should occur at all on the GMNF. This alternative was eliminated from detailed analysis because it would not adequately address the issues and meet the criteria set for revising the Forest Plan.

The provision of sustainable supplies of timber products is one of several of the original purposes for establishing national forests, as described in the Organic Act and Weeks Act. The Forest Service has been practicing sustainable silvicultural practices on the GMNF since its creation in the 1930s and is now at a point where long-term investments, such as thinning and stand improvement harvesting, will be more fully realized with continued management. Achieving the goals, objectives and the desired future condition of the Forest as described in the Proposed Revised Forest Plan are highly dependent on timber management activities. Timber harvesting is a necessary management tool for creating and maintaining desired wildlife habitat, and for maintaining and enhancing natural communities and other resources. Without timber harvesting scheduled to achieve these key objectives, this alternative would not meet the purpose and need of revising the Forest Plan.

Greatly Increased Timber Harvesting

This alternative was considered to address the public issue regarding the amount of timber harvesting that should occur on the GMNF, but more specifically whether timber harvesting should be increased. Public comments suggested that timber harvesting could be maximized by placing all lands except existing Wilderness and special areas into MAs that allow timber harvesting.

The National Forest Management Act, Multiple Use–Sustained Yield Act of 1960, the Endangered Species Act of 1973, and other laws require that National Forests be managed for a variety of uses and provide resource protections. This alternative was eliminated from detailed analysis because it emphasized timber production to such an extent that the management and protection of other resources would not adequately address the issues and meet the criteria set for revising the Forest Plan. For this reason, this alternative fails to meet the purpose and need of revising the Forest Plan. The issue associated with the role of timber harvesting, the amount of timber that should be cut, harvest methods that should be used, and timber management intensity are already adequately addressed at various levels in the five alternatives included for detailed analysis in the FEIS.

All Inventoried Roadless Areas Recommended as Wilderness

This alternative was considered to address the public issue of the amount of wilderness desired on the GMNF. In 2004, the Forest Service completed a roadless inventory and evaluation as part of the Forest Plan revision process. The inventory identified 36 roadless areas on the GMNF totaling 117,591 acres. The inventory was updated in 2005 to include a total of 37 roadless areas consisting of 124,321 acres. This alternative seeks a Forest Service recommendation that all of the Inventoried Roadless Areas (IRAs) be recommended for Wilderness study. In order to be recommended for wilderness designation, a roadless area has to be evaluated based on three criteria: availability, capability, and need. The 37 RAs identified in the *GMNF Roadless Inventory* were evaluated using the three criteria, and not all areas met the recommendation criteria (see Appendix C). Since all IRAs did not meet the minimum criteria to consider for inclusion in a Wilderness Study Area MA, the suggestion to recommend all 37 IRAs for Wilderness designation was eliminated from detailed study.

This alternative was also eliminated from detailed analysis because it would not adequately address the issues and meet the criteria set for revising the Forest Plan, and thus would not meet the purpose and need for the proposal. The National Forest Management Act, Multiple Use–Sustained Yield Act of 1960, Endangered Species Act of 1973, and other laws require that National Forests be managed for a variety of uses and provide resource protections. In this alternative approximately 31 percent (124,321 acres) of the total Forest land base would be placed in Wilderness Study Areas. When added to the 59,001 acres of existing Wilderness, 46 percent (183,322 acres) of the Forest land base would be allocated to management areas that limit some forms of recreation and other management opportunities, close existing roads, prohibit new timber harvest and road construction, and prohibit motorized recreation use and mountain biking. The issue of allocating additional land to wilderness is adequately addressed in the existing range of alternatives included for detailed analysis in this FEIS.

Vermont Wilderness Association Proposal

In November 2001, the Forest Service was presented with a proposal from the Vermont Wilderness Association, a coalition comprised of 15 State, regional, and national conservation groups. This alternative proposed an additional 79,200 acres (approximately 20% of the GMNF) as Wilderness, 45,000 acres (approximately 11% of the GMNF) as National Recreation Area, and 15,000 acres (approximately 4% of the GMNF) as National Conservation Area. This would increase congressionally designated

areas to 55 percent of GMNF acreage. The Forest Service considered this proposal but eliminated it from detailed study for a number of reasons.

The Forest Service has conducted, as required by regulation, a Roadless Inventory and subsequent Wilderness Evaluation as part of the Plan revision process and identified Roadless Areas that meet the national and regional criteria. Some of the areas desired for Wilderness designation in this alternative would not meet these requirements for a Roadless Area because they included roads and snowmobile trails. In addition, some of the areas proposed to be National Recreation Areas have large areas that are not on NFS lands and therefore could not be effectively managed as a National Recreation Area. The VWA proposal to designate the Moosalamoo area as a NRA was considered, and it was determined that the area's unique values would be better served by a recreation and education management area.

The National Forest Management Act, Multiple Use–Sustained Yield Act of 1960, the Endangered Species Act of 1973, and other laws require that National Forests be managed for a variety of uses and provide resource protections. This alternative emphasizes restrictive management designations to an extent that would be unreasonable, as management and protection of other resources would fall below acceptable levels. This alternative was also eliminated from detailed analysis because it would not adequately address the issues and meet the criteria set for revising the Forest Plan, and thus would not meet the purpose and need for the proposal. The issue of allocating additional land to designations such as wilderness and other special areas is addressed in the existing range of alternatives included for detailed analysis in this FEIS.

Initial Alternative A

At the preliminary stage of developing alternatives to address issues, Alternative A ("no-action" alternative or current management) included the allocation of more than 90,000 acres of newly acquired lands (MA 9.2) obtained before and after 1987 to other Management Areas thus allowing more proactive management activities to meet desired conditions. The allocation of these lands to another MA followed criteria that best met current management direction in the 1987 Forest Plan, and did not include any of the new MAs that have been developed and used for other alternatives such as Remote Wildlife Habitat, Wilderness Study Areas, and Green Mountain Escarpment. There were public concerns that this approach did not adequately represent a true "no-action" alternative as a basis for comparing the other alternatives considered for detailed analysis. The initial Alternative A as described during public meetings in June 2004 was replaced with a different approach as a result of this concern and thus was dismissed from further consideration. The new approach now consists of Alternative A retaining the newly acquired lands MA (MA 9.2) as well as those lands considered as significant streams (MA 9.4). This approach was taken in order to better reflect a baseline no-action alternative to compare the other Forest Plan revision alternatives (see Section 2.1.4).

2.1.7 Comparison of Alternatives

Table 2.1-6 compares the Management Area allocations by alternative. Table 2.1-7 compares how each alternative addresses the major issues. Table 2.1-8 briefly summarizes the environmental effects associated with the major issues and compares them by alternative. The detailed disclosure of the effects for all resources is found in Chapter 3.

Table 2.1-6: Management Area Allocations by Alternative

Management Area	Alt. A Current Management Acres (%)	Alt. B Acres (%)	Alt. C Acres (%)	Alt. D Acres (%)	Alt. E Acres (%)
Diverse Forest Use	110,271 (28%)	195,403 (49%)	120,778 (30%)	104,027(26%)	118,717 (30%)
Diverse Backcountry	85,139 (21%)	59,193 (15%)	94,497 (24%)	59,082 (15%)	59,665 (15%)
Remote Wildlife Habitat	0	12,115 (3%)	5,723 (1%)	42,187 (11%)	30,399 (8%)
Escarpment	0	2,894 (1%)	8,488 (2%)	17,710 (4%)	14,436 (4%)
Remote Backcountry	8,316 (2%)	22,163 (6%)	23,220 (6%)	23,036 (6%)	30,930 (8%)
Wilderness	59,001 (15%)	59,001 (15%)	59,001 (15%)	59,001 (15%)	59,001 (15%)
Wilderness Study Area	0	2,291 (1%)	29,360 (7%)	49,799 (12%)	27,473 (7%)
National Recreation Area	22,758 (6%)	22,758 (6%)	22,758 (6%)	22,758 (6%)	22,758 (6%)
Appalachian Trail	*14,473 (4%)	14,315 (4%)	14,315 (4%)	12,790 (3%)	13,629 (3%)
Long Trail	*2,927 (1%)	2,640 (1%)	2,511 (1%)	1,801 (1%)	2,640 (1%)
Recreation Special Areas	86 (<1%)	157 (<1%)	157 (<1%)	157 (<1%)	157 (<1%)
Moosalamoo Recreation and Education Area	0	0	12,702 (3%)	0	12,375 (3%)
Alpine Ski Areas	2,822 (1%)	3,067 (1%)	3,067 (1%)	3,067 (1%)	2,889 (1%)
Alpine Ski Area Expansion	554 (<1%)	518 (<1%)	518 (<1%)	518 (<1%)	518 (<1%)
Existing and Candidate Research Natural Areas	1,546 (<1%)	471 (<1%)	471 (<1%)	471 (<1%)	471 (<1%)
Ecological Special Areas	796 (<1%)	3,000 (1%)	2,420 (1%)	3,582 (1%)	3,928 (1%)
Alpine/Subalpine Special Area	0	706 (<1%)	706 (<1%)	706 (<1%)	706 (<1%)
Eligible Wild, Scenic, and Recreational Rivers[1]	0	24,743	24,743	24,743	24,743
Significant Streams[1]	45,538	0	0	0	0
Newly Acquired lands	92,003 (23%)	0	0	0	0

Source: GMNF GIS Alternative A Management Area Layer
‡ Notes: Total Forest acreage: ~400,000
*Does not include portions of the Appalachian and Long Trail Management Areas that intersect congressionally designated Wilderness & National Recreation Areas as shown on Alternative A maps
[1] Management Area applies to stream corridors (1/4 mile each side of stream) which overlay and run through all other management areas.

Table 2.1-7: Comparison of Alternatives by Issue					
Issue	**Alternative A**	**Alternative B**	**Alternative C**	**Alternative D**	**Alternative E**
Special Areas	*Does not add Wilderness Study Areas (WSAs) or new special areas	*WSA additions to improve wilderness boundary management *Small increase in special area designations	*Moosalamoo Recreation & Education Area *Glastenbury & Worth Mountain WSAs *Small increases in special area designations	*Has larger areas of Glastenbury and Worth Mountain WSAs *Most of the Escarpment in a special area *Adds other additional special areas	* Moosalamoo Recreation & Education Area *Glastenbury Mountain WSA *Many portions of the Escarpment in special Area MA
Ecosystem Management & Biodiversity	*Does not designate newly acquired lands	*Greatest opportunities for early successional habitat creation	*Relatively even mix of opportunities for restoration, conservation, and early successional habitat	*Most opportunities for restoration and conservation of natural communities	*Relatively even mix of opportunities for restoration, conservation, and early successional habitat
Social & Economic Concerns	*Less areas focused on remote recreation and special areas *least areas for timber production and motorized recreation	*Most areas for timber production, increased areas for remote non-motorized recreation and special areas *Provides fewer opportunities for remote motorized rec.	*More remote non-motorized and motorized recreation opportunities *Moosalamoo Recreation & Education area *Less timber production	*Most special areas, and remote non-motorized recreation *Least motorized recreation opportunities and timber harvesting	*Relatively even mix of opportunities *More remote non-motorized and motorized recreation opportunities *Moosalamoo Recreation & Education Area *Less timber production
Recreation Management	*No increase in WSAs *No designation of MA 9.2 lands *Decreases recreation opportunities	*Slight additions to WSA and remote area MAs *Highest opportunity for motorized and developed recreation	*Relatively even mix of wilderness/ remote recreational opportunities and motorized/ developed recreational opportunities	*Greatest amount of wilderness/ remote recreational opportunities *Greatest amount of non-recreation special areas *Lowest level of motorized/ developed recreational opportunities	*Slightly less WSAs and remote area MAs than Alt. D *Moderate amount of motorized/ developed recreational opportunities *More remote wildlife than other alternatives
Timber Management	*Lowest ASQ and suitable land base	*Highest ASQ and suitable land base *Highest amount with flexible/intensive management and timber harvesting	*Most areas in Backcountry Forest with longer rotations *Similar area with flexible/intensive management as Alt, E	*Least amount of area with flexible/intensive timber management *More areas with focused timber management (escarpment and remote wildlife)	*Balanced mix of flexible /intensive timber management areas and areas with specific timber management focuses

Table 2.1-8: Comparison of Environmental Effects by Alternative

Issue/Indicator	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E
Special Designations					
The number of acres recommended for wilderness designation (land allocated to Wilderness Study Area (WSA) Management Area)	There would be no proposed WSAs, and would offer the least opportunity for expanded wilderness among the alternatives.	There would be 2,291 acres of WSAs, representing one percent of the total GMNF acreage. Acres would be additions to Breadloaf Wilderness (North Half of the Forest) for boundary adjustments.	There would be 29,360 acres of WSAs, representing seven percent of the total GMNF acreage. There would be additions to existing wilderness on both the North and South half of the Forest for boundary adjustments, and includes two stand alone WSAs (portions of the Glastenbury and Worth Mountain areas).	There would be 49,799 acres of WSAs, representing twelve percent of the total GMNF acreage. There would be additions to existing wilderness on both the North and South half of the Forest for boundary adjustments, and includes two stand alone WSAs (larger portions of the Glastenbury and Worth Mountain areas than Alternative C). This would be the largest WSA acreage of any of the alternatives.	There would be 27,473 acres of WSAs, representing seven percent of the total GMNF acreage. There would be additions to existing wilderness on both the North and South half of the Forest for boundary adjustments, and includes one stand alone WSA (a larger portion of the Glastenbury area than Alternative C, but smaller than Alternative D).
Number of unique natural communities included in recommended wilderness	There would be no proposed Wilderness Study Areas.	There would be 2,291 acres of potential future old growth forest.	There would be three significant features within the proposed Wilderness Study Areas (Glastenbury Mountain, Monastery Mountain, and Middlebury Gap), and 29,360 acres of potential future old growth forest.	There would be four significant features within the proposed Wilderness Study Areas (Glastenbury Mountain, Little Pond, Monastery Mountain, and Middlebury Gap), and 49,799 acres of potential future old growth forest.	There would be two significant features within the proposed Wilderness Study Areas (Glastenbury Mountain and Little Pond), and 27,473 acres of potential future old growth forest.
Impacts of wilderness designation on recreation opportunities	No new proposed Wilderness Study Areas. No impacts to existing recreation opportunities.	There would be 0.3 miles of existing road and three recreation facilities inconsistent with Wilderness Act direction. Displacement of existing uses and impacts to forest visitors would be minimal.	There would be 7.8 miles of existing roads and three recreation facilities inconsistent with Wilderness Act direction. Displacement of existing uses and impacts to forest visitors would be minimal.	There would be 12 miles of existing snowmobile trails, 19.3 miles of roads, and eight recreation facilities inconsistent with Wilderness Act direction. Displacement of existing uses and impacts to forest users would be greatest among the alternatives.	There would be 7.8 miles of existing roads and three recreation facilities inconsistent with Wilderness Act direction. Displacement of existing uses and impacts to forest visitors would be minimal.
Acres of suitable land for timber production removed from management if designated wilderness	No new proposed Wilderness Study Areas. No land would be determined unsuitable for timber production due to Wilderness Study Area designation.	Approximately 1,958 acres of land suitable for timber production would be determined unsuitable due to Wilderness Study Areas.	Approximately 16,314 acres of land suitable for timber production would be determined unsuitable due to Wilderness Study Areas.	Approximately 31,409 acres of land suitable for timber production would be determined unsuitable due to Wilderness Study Areas.	Approximately 12,262 acres of land suitable for timber production would be determined unsuitable due to Wilderness Study Areas.
Community values associated with wilderness designation	Does not address the desire for additional Wilderness designation.	The desire for additional wilderness is addressed by adding to existing wilderness areas only to improve boundary management in towns that did not officially oppose additional wilderness.	The desire for additional wilderness is addressed by adding 29,360 acres, the second greatest amount next to Alternative D.	The desire for additional wilderness is addressed by adding 49,799 acres, the greatest amount of all the alternatives. The potential amount of wilderness may detract from the public desire for developed and motorized recreational opportunities, and may reduce opportunities for resource management through timber harvesting and other vegetation management tools.	The desire for additional wilderness is addressed by adding 27,473 acres, the intermediate amount between the alternatives, but only 1,877 acres less than Alternative C.
Acres of Research Natural Areas (RNAs), candidate RNAs, ecological Special Management Areas (SMAs), and Old Growth Areas	Provides the largest number of acres within the ecological reference area network at 221,854 acres, or 55% of the Forest, with 41% of the acres coming from the Newly Acquired Lands designation.	Provides the least number of acres within the ecological reference area network at over 149,617 acres, or 37% of the Forest.	Provides an intermediate number of acres within the ecological reference area network at 172,624 acres, or 43% of the Forest.	Provides the second largest number of acres within the ecological reference area network at 188,014 acres, or 47% of the Forest.	Provides an intermediate number of acres within the ecological reference area network at 177,183 acres, or 44%of the Forest.

Table 2.1-8: Comparison of Environmental Effects by Alternative

Issue/Indicator	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E
Percentage of Ecological Units Represented Within RNAs, cRNAs, ecological SMAs, and Old Growth Areas	All Land Type Associations (LTAs), Ecological Land Unit Groups (ELUGs), and forest communities are represented at greater than the desired 5% objective with the exception of Alpine/Krumholtz which was incorrectly mapped. The Newly Acquired Lands MA is included as part of the old growth grouping.	All ELUGs, and forest communities are represented at the greater than 5% objective. All but one LTA (Mountain Slope LTA in the Taconics) is represented at the greater than the desired 5% objective.	Same as Alternative B.	All LTAs, ELUGs, and forest communities are represented at the greater than 5% objective. Provides slightly better overall representation of some ecosystem types than the other alternatives.	All LTAs, ELUGs, and forest communities are represented at the greater than 5% objective. Provides second best overall representation of some ecosystem types among the other alternatives.
Biodiversity and Ecosystem Management					
Amount of each major forest community type (composition and abundance) *Oak and Oak-Pine Forest Communities*	The abundance of oak would be less likely to increase over the long-term, and more likely to be maintained at the low end of the composition objective range.	The abundance of oak would likely increase slightly more than Alternative A, but less than the other alternatives. It would tend to maintain oak abundance at the low end of the long-term composition objective range.	Would tend to maintain oak abundance at the lower to middle end of the desired long-term composition objective range.	Would likely increase oak abundance across the Forest substantially more than Alternatives A, B, and C, and slightly more than Alternative E, toward the middle to upper end of the desired long-term composition objective range.	Would likely be almost as effective as Alternative D at maintaining and increasing oak communities across the Forest. Would likely increase the abundance of this community over the long-term toward the middle to upper end of the desired long-term composition objective range.
Non-forest Communities	Provides fewer acres than the other alternatives with moderate to high opportunities for creation of new upland openings, and the most acres in lands that do not allow opening creation. Consequently, the abundance of upland openings would likely not increase as much as in other alternatives.	Provides more acres than the other alternatives with moderate to high opportunities for upland openings creation. More likely than the other alternatives to increase the abundance of upland openings needed to reach the upper end of the desired long-term composition range.	Would increase upland opening abundance (greater than Alternatives A and D) toward the middle of the desired long-term composition objective range.	Maintains the abundance of upland opening habitat at the low end of the composition objective range. Opportunities for creation of new openings may be fewer, and increases in abundance are likely to be less than in the other alternatives except Alternative A.	Would increase upland opening abundance toward the middle of the desired long-term composition objective range, similar to Alternative C.
Aspen-Birch Communities	Provides the least amount of acres in lands with moderate to high opportunities for creating new stands of aspen-birch forest, and the most acres in lands where this management is prohibited. The abundance of aspen-birch forest is not likely to increase as much in this alternative as in others.	Provides the greatest amount of acres in lands with moderate to high opportunities for creating new stands of aspen-birch forest. Is more likely than the other alternatives to increase the abundance of aspen-birch forest toward the upper end of the desired long-term composition objective range.	Expected to increase the abundance of aspen-birch forest more than Alternatives A and D, and would likely increase aspen-birch abundance toward the lower to middle portion of the desired long-term composition objective range.	Would likely be less effective at increasing the abundance of aspen-birch forest than all other alternatives with the exception of Alternative A. Would tend to create enough new aspen-birch forest to maintain this community at the low end of the desired long-term composition objective range.	Similar to Alternative C, although it would provide for aspen-birch forest at the lower end of the composition objective range similar to Alternative A if non-commercial activities prove to be an unreliable tool to manage this community type.
Northern Hardwood, Mixedwood, and Softwood Forest Communities	Northern Hardwood, Mixedwood, and Softwood Forest Communities would become well-distributed over several decades to centuries. There are no substantial differences in how well the alternatives would move the Forest toward these composition tendencies. All alternatives provide abundant opportunities for both management and natural succession towards the composition objectives for these forest communities. Vegetation management may contribute to or accelerate the inevitable natural shifts in composition for these communities across alternatives, but it would account for only a two percent increase in the composition of mixedwoods and softwoods combined over the short-term. Over several decades to centuries, this shift may become more noticeable, but would not likely vary by alternative.				
Proportion of each major forest community type in various age categories (Age Class Distribution)	All alternatives increase the proportion of the regenerating age class across the Forest by at least five times their current levels (within a range of five to seven percent of the GMNF, for both the short and long-term). The young age class falls within a range of 14 to 17 percent in the short-term, and 23 to 32 percent for the long-term. The projected proportion of the Forest in mature or older forest falls within a range of 74 to 82 percent in the short-term. In the long-term, the proportion is lower, 58 to 75 percent, but not appreciably different between alternatives. All alternatives and forest communities are expected to have a substantial reduction in the mature age class, particularly after 150 years, while the other age classes show increases. Forest communities would continue to age in over 33% of the Forest across all alternatives, moving from the mature to old age class except where large scale natural disturbance would occur.				

Table 2.1-8: Comparison of Environmental Effects by Alternative

Issue/Indicator	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E
Acres of white-tailed deer wintering habitat allocated to Management Areas allowing vegetation management	Provides the least acreage of deer wintering areas in which vegetation management is permitted (13,826 acres, 69% of deer wintering area acres on the Forest).	Provides the most acreage of deer wintering areas in which vegetation management is permitted (15,586 acres, 78% of deer wintering area acres on the Forest).	Alternatives C, D, and E provide similar amounts of acreage of deer wintering areas in which vegetation management is permitted with 14,988 acres (75% of the total) in Alternative C, 14,903 (75% of the total) in Alternative D, and 14,591 acres (73% of the total) in Alternative E.		
Early successional habitat provided and opportunities for its management	Provides the least opportunity for management of upland openings, allocating the lowest proportion of the Forest (55%) to MAs with high to moderate opportunity for creating or maintaining them.	Provides the greatest opportunity for management of upland openings, allocating the highest proportion of the Forest (72%) to MAs with high to moderate opportunity for creating or maintaining them.	Provides an intermediate opportunity for management of upland openings, allocating 64% of the Forest to MAs with high to moderate opportunity for creating or maintaining them.	Provides the second lowest opportunity for management of upland openings, allocating 57% of the Forest to MAs with high to moderate opportunity for creating or maintaining them.	Provides an intermediate opportunity for management of upland openings, allocating 61% of the Forest to MAs with high to moderate opportunity for creating or maintaining them.
Acres available as habitat for reclusive wildlife species	Allocates the least amount of land with 90,645 acres (23% of the Forest) to MAs that provide remote habitat for reclusive wildlife species. Because Alternative A is the "no action" alternative, the newly-developed Remote Wildlife Habitat MA is not available. Of the remote habitat acres, 22,758 acres (25%) would be in MAs that allow vegetation management.	Allocates slightly more land to MAs that provide remote habitat for reclusive wildlife species (119,604 acres, 30% of the Forest) than Alternative A, but less than all other alternatives. Of the remote habitat acres, 34,873 acres (29%) would be in MAs that allow vegetation management.	Allocates an intermediate amount of land to MAs that provide remote habitat for reclusive wildlife species (141,338 acres, 35% of the Forest). Of the remote habitat acres, 28,481 acres (20%) would be in MAs that allow vegetation management.	Allocates the greatest amount of land to MAs that provide remote habitat for reclusive wildlife species (198,057 acres, 49% of the Forest). Of the remote habitat acres, 64,945 acres (33%) would be in MAs that allow vegetation management.	Allocates the second highest amount of land to MAs that provide remote habitat for reclusive wildlife species (171,837 acres, 43% of the Forest). Of the remote habitat acres, 53,157 acres (31%) would be in MAs that allow vegetation management.
Acres of habitat available for Management Indicator Species and their population trends	Would be most difficult to increase the amount and quality of aspen or aspen-birch habitat on the GMNF, and thus would provide the least benefit to ruffed grouse and other species that depend on or frequent aspen-birch forests. The projected trend for amount and quality of oak and oak-pine habitat is stable for the short-term. Over the long-term, however, oak and oak-pine likely would decline, and thus the potential benefits to gray squirrels and other species that utilize oak-pine forests would be lowest under this alternative. The potential impacts to the quality of the aquatic-riparian habitat for brook trout and other aquatic and riparian species would be negligible.	Would be more likely than the other alternatives to increase the abundance of aspen-birch forest toward the upper end of the desired long-term composition objective range for the Forest, and thus would provide the greatest benefit to ruffed grouse and other species. The projected trend for amount and quality of oak and oak-pine habitat is stable for the short and long-term. Would provide low potential benefits to gray squirrels and other species that utilize oak-pine forests. The potential impacts to the quality of the aquatic-riparian habitat for brook trout and other aquatic and riparian species would be negligible.	Would likely increase aspen-birch abundance toward the lower to middle portion of the desired long-term composition objective range and thus would provide an intermediate level of benefit to ruffed grouse and other species. The projected trend for amount and quality of oak and oak-pine habitat is stable for the short-term and a slight increase for the long-term. Would provide moderate potential benefits to gray squirrels and other species that utilize oak-pine forests. Represents a greater potential for short-term adverse impact on the quantity and quality of brook trout habitat than Alternatives A and B, but less than for Alternative D.	Would likely provide for enough aspen-birch forest to maintain this community at the low end of the desired long-term composition objective range. Would provide a greater level of benefit to ruffed grouse and other species that utilize aspen-birch than Alternative A, but less than all other alternatives. The projected trend for amount and quality of oak and oak-pine habitat is to increase for both the short- and long-term, and thus provide high potential benefits to gray squirrels and other species that utilize this habitat. Management restrictions may diminish the overall quality of brook trout habitat on the GMNF, and thus has the greatest potential for short-term adverse impact on the quantity and quality of brook trout habitat among the alternatives.	Would likely increase aspen-birch abundance toward the lower to middle portion of the desired long-term composition objective range and thus would provide an intermediate level of benefit to ruffed grouse and other species. The projected trend for amount and quality of oak and oak-pine habitat is to increase for both the short- and long-term, and thus provide high potential benefits to gray squirrels and other species that utilize this habitat similar to Alternative D. Represents a greater potential for short-term adverse impact on the quantity and quality of brook trout habitat than Alternatives A and B, but less than for Alternative D.
Viability outcomes for species of potential viability concerns	The viability outcomes of the species of potential viability concern would not changes under any alternative. For the majority of species there are no differences in effects across alternatives over the short-term. In the few species where there are differences in the effects across alternatives, these differences are slight and would not change the viability outcomes.				

Table 2.1-8: Comparison of Environmental Effects by Alternative

Issue/Indicator	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E
Social and Economic Concerns					
Community values	Does not address the stated community concern over lack of management on newly acquired lands. Does not address the desire for additional Wilderness designation, or the desire for improved timber economics and availability.	Provides the greatest opportunity to address community concerns about timber resources, forest related industries, and economics. It also allows for more opportunities for developed and motorized recreation, but may detract from the community desire to have more areas with non-motorized use.	Provides an intermediate opportunity to address community concerns about timber resources, forest related industries, and economics. Provides for an intermediate level of opportunities for developed and motorized recreation. Provides an intermediate level of emphasis on community desire to have more areas with non-motorized use. Addresses community desire for additional wilderness by adding 29,360 acres, the second greatest amount next to Alternative D. Provides opportunities for tourism economics by assigning 12,702 acres (3%) to the Moosalamoo Recreation and Education Area.	Provides the second lowest opportunity to address community concerns about timber resources, forest related industries, and economics. Provides the greatest opportunity to address the community desire to have more areas with non-motorized use. Addresses the community desire for additional wilderness by adding 49,799 acres, the greatest amount of all the alternatives. The potential amount of wilderness could detract from the public desire for developed and motorized recreational opportunities, and may reduce opportunities for resource management through timber harvesting and other vegetation management tools.	Provides an intermediate opportunity similar to Alternative C to address community concerns about timber resources, forest related industries, and economics. Would focus timber harvesting on the most suitable lands and in the most accessible areas providing for increased economic sustainability. Provides opportunities for tourism economics by assigning 12,375 acres (3%) to the Moosalamoo Recreation and Education MA. An intermediate level of emphasis is placed on the community desire to have more areas with non-motorized use. Addresses community desire for additional wilderness by adding 27,473 acres.
Economic impacts	Would provide the least potential employment and income contributions from Forest Service programs.	Alternatives B, C, and E provide similar potential employment and income opportunities and have negligible differences in their economic impact on the analysis area. These three alternatives have a greater employment and income contribution than A and D.	Alternatives B, C, and E provide similar potential employment and income opportunities and have negligible differences in their economic impact on the analysis area. These three alternatives have a greater employment and income contribution than A and D.	Provides an intermediate potential employment and income contribution from Forest Service programs, between Alternative A and the other alternatives. Provides the potential for approximately 800,000 to 1,000,000 dollars less income and 24 to 30 fewer jobs than Alternatives B, C, and E due to the lower volume of timber harvesting than in Alternatives B, C, and E.	Alternatives B, C, and E would provide similar potential employment and income opportunities and have negligible differences in their economic impact on the analysis area. These three alternatives have a greater employment and income contribution than A and D.
Present Net Value (PNV) in thousands of dollars	2,308,593	2,340,861	2,337,464	2,328,844	2,332,102

Table 2.1-8: Comparison of Environmental Effects by Alternative

Issue/Indicator	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E
Recreation Management					
Desired Recreation Opportunity Spectrum (ROS) classes by Management Area	Provides for the greatest majority (72%) of the Forest recreation opportunities in the motorized ROS classes (Rural, Roaded Natural and Semi-primitive Motorized). Allocates 23% of the Forest to MA 9.2 newly acquired lands which does not have a desired ROS class. Does not fulfill the Forest Plan goal to provide recreation opportunities that complement those off of NFS lands since most areas adjacent to the Forest are generally considered roaded natural and/or rural..	Provides for 71% of the Forest recreation opportunities in the motorized ROS classes (Rural, Roaded Natural, and Semi-primitive Motorized). Emphasizes the greatest amount of Roaded Natural recreation opportunities (49% of the Forest in Roaded Natural ROS class) compared to all alternatives. Does not fulfill the Forest Plan goal to provide enough recreation opportunities in the Semi-primitive Non-motorized and Primitive ROS classes that complement those off of NFS lands, since most areas adjacent to the Forest are generally considered roaded natural and/or rural.	Provides for 65% of the Forest recreation opportunities in the motorized ROS classes (Rural, Roaded Natural and Semi-primitive Motorized). Provides for the Forest to be managed towards a nearly equal amount of the Roaded Natural (33%) and Semi-primitive Motorized (31%) ROS classes. Semi-primitive Non-motorized and Primitive ROS classes are emphasized on 12% and 22% of the Forest, respectively. Does not provide the optimum to achieve the Forest Plan goal of providing a diverse range of recreation opportunities that complement those provided off NFS lands.	Provides for the Forest to be proportionally divided between Roaded Natural (26%), Semi-primitive Motorized (25%), Semi-primitive Non-motorized (21%) and Primitive (27%) ROS classes. Provides the greatest amount of non-motorized ROS settings, (Semi-primitive Non-motorized and Primitive) and the least amount of motorized ROS settings compared to all other alternatives. Provides the optimum to achieve the Forest Plan goal of providing a diverse range of recreation opportunities that complement those provided off NFS lands.	Provides for the majority of the Forest (57%) to be managed toward the Roaded Natural (33%) and Semi-primitive Motorized (24%) ROS classes. The remainder will be managed toward the Semi-primitive Non-motorized (21%) and Primitive (22%) ROS classes. Provides more non-motorized ROS settings, (Semi-primitive Non-motorized and Primitive), than Alternatives A, B and C, but less than Alternative D. It does a good job of achieving the Forest Plan goal of providing a diverse range of recreation opportunities that complement those provided off NFS lands.
Number of acres available for development by trail activity	Provides for 77% of the Forest to remain open for future hiking trail development. It is the most restrictive for future hiking trail development because of the large proportion of MA 9.2 newly acquired lands. 58% would remain open to future bicycling and horse/pack animal/dog team trails. 55% would remain open for future snowmobile trail development and 49% would be available for consideration of potential future summer ORV trails.	Provides for 97% of the Forest to remain open for future hiking trail development. 77% of the Forest would remain open to future bicycling and horse/pack animal/dog team trails. 70% of the Forest would remain open to future snowmobile trails and 64% would be available for consideration of potential future summer ORV trails. Overall, provides for the maximum diversity of opportunities for future trail uses.	Provides for 99% of the Forest to remain open to future hiking trail development, the most among the alternatives. 72% of the Forest would remain open to future bicycling and horse/pack animal/dog team trails. 63% of the Forest would be open to future snowmobile trails and 54% would be available for consideration of potential future summer ORV trails. .	Provides for 89% of the Forest to remain open to future hiking trails. 58% of the Forest would remain open to future bicycling and horse/pack animal/dog team trails. 47% of the Forest would remain open to future snowmobile trails and 41% would be available for consideration of potential future summer ORV trails. Provides for the least amount of land to be open to new trail construction for most use types, and is the most restrictive to snowmobile and summer ORV trail development.	Provides for 92% of the Forest to remain open to future hiking trails. 66% of the Forest would remain open to future bicycling and horse/pack animal/dog team trails. 54% of the Forest would remain open to future snowmobile trails and 45% would be available for consideration of potential future summer ORV trails. Compared to the other action alternatives, this alternative is the second most restrictive in terms of both motorized and non-motorized trail-based recreation.
Acres of land available for future developed recreation facilities	Provides for an almost equal distribution of Forest lands to be open (135,937 acres, 34% of the Forest), limited (112,205 acres, 28%), or closed (152,550 acres, 38%) to future developed recreation facilities.	Would have the greatest amount of acres open to future developed recreation facilities (221,385 acres, 55% of the Forest), and the least amount limited (105,429 acres, 26%) or closed (73,878 acres, 18%).	Provides an intermediate amount of acres open to future developed recreation facilities (159,462 acres, 40% of the Forest), allowing for more of the Forest to remain open than Alternative A. Provides for most amount limited (146,675 acres, 37%) among the alternatives, and provides for 94,555 acres (24%) to be closed.	Provides for the least amount of acres open (130,009 acres, 32% of the Forest) and the second lowest amount limited (119,225 acres, 30%). Provides for 151,458 acres (38%) to be closed, similar to Alternative A.	Provides for a similar amount of the Forest to be open to future developed recreation facilities (156,896 acres, 39% of the Forest), and slightly higher amounts to be limited (126,452 acres, 32%) and closed (117,284 acres, 29%) as Alternative C.

Table 2.1-8: Comparison of Environmental Effects by Alternative

Issue/Indicator	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E
Acres of land available for recreation special use activities	Provides for 221,630 acres (34% of the Forest) to be open and 85,513 acres (21%) to be limited to future recreation special use activities. Would be most restrictive for future recreation special use activities with 93,549 acres (23%) closed, and would provide minimum opportunities to achieve the recreation goal and niche of the Forest because of the high proportion of MA 9.2 newly acquired lands that prohibit future recreation special use services.	In Alternatives B through E the majority of the Forest (over 99%) is open or limited to recreation special use activities. Recreation special use opportunities would meet the demand for a growing population. None of the alternatives propose expanding the Alpine Ski Area MA and Alpine Ski Area Expansion MA because there is currently ample capacity to meet projected future demands. All of these alternatives would provide similar capacities for future recreation services under special use permit. These alternatives would all achieve the Forest recreation goal and recreation niche to provide high-quality recreation opportunities.			
Timber Management					
Acres of land Identified as suitable for timber production	Would have the least amount of suitable forest land. A total of 157,673 acres (39% of total Forest) would be considered suitable for timber production. Of this total, 71,777 acres are on lands considered highly productive. No acres of Newly Acquired Lands (MA 9.2) would be considered suitable for timber production.	Would have the greatest amount of suitable forest land. A total of 216,430 acres (54%) would be considered suitable for timber production. Of this total, 92,802 acres are on lands considered highly productive. Approximately 65,942 acres of tentatively suitable forest land that was acquired since 1982 would be considered suitable in this alternative.	Would be intermediate in the amount of suitable forest land. A total of 193,791 acres (48%) would be considered suitable for timber production. Of this total, 85,610 acres are on lands considered highly productive. Approximately 58,726 acres of tentatively suitable forest land that was acquired since 1982 would be considered suitable in this alternative.	Would be intermediate in the amount of suitable forest land. A total of 180,381 acres (45%) would be considered suitable for timber production. Of this total, 82,207 acres are on lands considered highly productive. Approximately 48,626 acres of tentatively suitable forest land that was acquired since 1982 would be considered suitable in this alternative.	Would be intermediate in the amount of suitable forest land. A total 189,616 acres (49%) would be considered suitable for timber production. Of this total, 85,226 acres would be on lands considered highly productive. Approximately 55,058 acres of tentatively suitable forest land that was acquired since 1982 would be considered suitable in this alternative.
Timber sale volume - average annual Allowable Sale Quantity (ASQ)	Would have the lowest potential timber volume that could be sold of all the alternatives. The average annual ASQ would be 13.8 MMBF over the short-term (next 10-15 years) and long-term (over the next 150 years).	Would have the maximum potential timber volume that could be sold of all the alternatives. The average annual ASQ would be 17.5 MMBF over the short and long-term.	Would have an intermediate level of potential timber volume that could be sold compared to the other alternatives. The average annual ASQ would be 16.8 MMBF over the short and long-term.	Would have an intermediate level of potential timber volume that could be sold compared to the other alternatives, but slightly less than Alternatives C and E. The average annual ASQ would be 16.0 MMBF over the short and long-term.	Would have an intermediate level of potential timber volume that could be sold compared to the other alternatives. The average annual ASQ would be 16.4 MMBF over the short and long-term.

Table 2.1-8: Comparison of Environmental Effects by Alternative

Issue/Indicator	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E
Acres of harvest treatment methods	Would have the least opportunity for even-aged timber harvesting and the second least opportunity for uneven-aged timber harvesting. Even-aged Management (2,698 acres) • Thinning Harvest: 1,000 acres • Shelterwood Regeneration: 1,161 acres • Shelterwood Removal: 280 acres • Clearcut: 257 acres Uneven-Aged Management Selection: 802 acres **Total Harvesting:** **3,500 acres**	Would have the highest opportunity for both even-aged and uneven-aged timber harvesting. Even-aged Management (3,209 acres) • Thinning Harvest: 1,000 acres • Shelterwood Regeneration: 1,475 acres • Shelterwood Removal: 376 acres • Clearcut: 358 acres Uneven-Aged Management • Selection: 1,494 acres **Total Harvesting:** **4,703 acres**	Would have intermediate opportunities for both even-aged and uneven-aged timber harvesting. Even-aged Management (3,171 acres) • Thinning Harvest: 1,000 acres • Shelterwood Regeneration: 1,537 acres • Shelterwood Removal: 323 acres • Clearcut: 311 acres Uneven-Aged Management • Selection: 863 acres **Total Harvesting:** **4,034 acres**	Would have intermediate opportunities for both even-aged and uneven-aged timber harvesting and would have the least opportunity for timber harvesting except for Alternative A. Even-aged Management (3,056 acres) • Thinning Harvest: 1,000 acres • Shelterwood Regeneration: 1,451 acres • Shelterwood Removal: 307 acres • Clearcut: 298 acres Uneven-Aged Management • Selection: 778 acres **Total Harvesting:** **3,834 acres**	Similar to Alternative C, it would have intermediate opportunities for both even-aged and uneven-aged timber harvesting. Even-aged Management (3,074 acres) • Thinning Harvest: 1,000 acres • Shelterwood Regeneration: 1,431 acres • Shelterwood Removal: 324 acres Clearcut: 319 acres Uneven-Aged Management Selection: 981 acres **Total Harvesting:** **4,055 acres**